Scott M. Matheson
Governor

James O. Mason, M.D., Dr.P.H.
Executive Director
801-533-6111

DIVISIONS
Community Health Services
Environmental Health
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STATE OF UTAH
DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
150 West North Temple, P.O. Box 2500, Salt Lake City, Utah 84110-2500

Kenneth Lee Alkema, Director
Room 474 801-533-6121

August 15, 1984

Mr. Eric Johnson
U.S. Environmental Protection Agency
Region VIII
1860 Lincoln Street
Denver, Colorado 80295

Subject: Preliminary Assessment Report Richardson Flat Tailings, Summit County Utah

Dear Mr. Johnson:

Submitted herewith is a final preliminary assessment report for the Richardson Flat tailings.

Based upon information available at the time this assessment was made, it is recommended that this site be given a medium priority and that a site inspection be performed during the third quarter of 1984.

Richardson Flat tailings are located between Park City and Keetley Junction. The exact amount of tailings on-site is unknown. But it is estimated that there are approximately 7 million tons of tailings most likely deposited in the late 60's and early 70's.

The mill tailings at Richardson Flat came from the Ontario Keetley mine and other mines owned by United Park City mines. The tailings are next to Silver Creek and numerous small tributaries flow through the tailings. Mr. Ray Wortey is currently leasing the tailings from United Park City mines and is using the tailings as backfill for sewer lines and road base.

During the site inspection samples will be collected from surface water, groundwater (if found) and from the tailings. If you have any questions please contact Don Verbica.

Sincerely,

Dale D. Parker, Ph.D.
Executive Secretary
Utah Solid and Hazardous Wastes
Committee

DGV/ab
5597

EPA POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE 02 SITE NO.

II. SITE NAME AND LOCATION

01 SITE NAME (Logo, common or descriptive name of site)
Richardson's Flat Tailings

02 STREET, ROUTE NO. OR SPECIFICATION LOCATION IDENTIFIER 03 CITY
NW 1/4 Sec 1 T25 R4E Park City East Quadrangle

04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST.
Utah		Summit	043	3

09 COORDINATES LATITUDE LONGITUDE
40 40 42._ 111 27 05._

10 DIRECTIONS TO SITE (Starting from nearest public road)
Take I80 east from Salt Lake City. Turn south on Heber exit to Keetley June, site is approximately 2000' southeast of Keetley on south side of road next to Park City's landfill.

III. RESPONSIBLE PARTIES

01 OWNER (if known)
Noranda (Park City Ventures)

02 STREET (Business, mailing, residential)
P.O. Box 1450

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Park City	Utah		(801)649-9414

07 OPERATOR (if known and different from owner)
Park City Ventures

08 STREET (Business, mailing, residential)
P.O. Box 1450

09 CITY
Park City

10 STATE
Utah

11 ZIP CODE 12 TELEPHONE NUMBER
(801)649-9414

13 TYPE OF OWNERSHIP (Check one)
X A. PRIVATE B. FEDERAL:_____ C. STATE
D. COUNTY E. MUNICIPAL F. OTHER:_____ G. UNKNOWN
(Specify)

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
A. RCRA 3001 DATE RECEIVED ___/___/___
B. UNCONTROLLED WASTE SITE (CERCLA 103c) DATE RECEIVED ___/___/___
X C. NONE

IV CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION BY (Check all that apply)
X YES DATE 06/04/84
NO
A. EPA B. EPA CONTRACTOR
X C. STATE D. OTHER CONTRACTOR
E. LOCAL HEALTH OFFICIAL
F. OTHER:_____
(Specify)
CONTRACTOR NAME(S):

02 SITE STATUS (check one)
A. ACTIVE X B. INACTIVE C. UNKNOWN

03 YEARS OF OPERATION
BEGINNING YEAR ENDING YEAR UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT KNOWN OR ALLEGED
The mine tailings at Richardson flat came from the Ontario, Keetley mine. The tailings are next to Silver Creek and numerous small tributaries flow through the tailings. A Mr. Ray Wortley leases the tailings and is using them as backfill for sewer lines.

EPA | POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE 02 SITE NO.

IV CHARACTERIZATION OF POTENTIAL HAZARD

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
The tailngs contain high levels of lead, arsenic and cadmium which are leachable and could migrate into the surface and groundwater.

V PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one, if high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

A. HIGH (inspection required promptly)
X B. MEDIUM (inspection required)
C. LOW (inspect on time available basis)
D. NONE (No further action needed, complete current disposition form)

VI INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency, Organization)	03 TELEPHONE NUMBER
Don Verbica	USHD/BSHW	(801)533-4145

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.
Dale Parker	USHD	BSHW	(801)533-4145

08 DATE
07/13/84

EPA FORM 2070-12(7-81)

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NO.

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- A. SOLID
- B. POWDER, FINES
- C. SLUDGE
- D. OTHER (Specify)
- E. SLURRY
- F. LIQUID
- G. GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

* TONS 7 million
CUBIC YARDS
NO. OF DRUMS

03 WASTE CHARACTERISTICS (Check all that apply)

- X A. TOXIC
- B. CORROSIVE
- C. RADIOACTIVE
- X D. PERSISTENT
- X E. SOLUBLE
- F. INFECTIOUS
- G. FLAMMABLE
- H. IGNITABLE
- I. HIGHLY VOLATILE
- J. EXPLOSIVE
- K. REACTIVE
- L. INCOMPATIBLE
- M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS	unknown	As	
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	unknown	Pb, Cd	

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/ DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	Lead	999	SI	31.8	ppm surface water (total metals)
MES	cadmium	999	SI	.120	ppm surface water (total metals)
IOC	arsenic	999	SI	.40	ppm surface water (total metals)

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

sample analysis, state files

EPA FORM 2070-12(7-81)

* Tonage based on 160 acres 20 feet thick

EPA POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE 02 SITE NO.

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 A. GROUNDWATER CONTAMINATION 02 OBSERVED (DATE:_____) X POTENTIAL
03 POPULATION POTENTIALLY AFFECTED: 10,000[1]* ALLEGED
04 NARRATIVE DESCRIPTION
Potential exists for the contamination of groundwater. The tailings lie next to Silver Creek and sit on top of old stream sediments (sands and clays). The water table is relatively high due to Silver Creek. The tailings are porous and could be leached, the resulting leachate could migrate into the groundwater.

01 B. SURFACE WATER CONTAMINATION 02 OBSERVED (DATE:_____) X POTENTIAL
03 POPULATION POTENTIALLY AFFECTED: 10,000[1]* ALLEGED
04 NARRATIVE DESCRIPTION
Potential exists for the contamination of surface water. Many samll tributaries of Silver Creek flow through the tailings and from a pond. Silver Creek lies due west of the site and could be effected by any leachate forming on the tailings.

01 C. CONTAMINATION OF AIR 02 OBSERVED (DATE:_____) X POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 10,000[2]* 04 NARRATIVE DESCRIPTION
Potential exists for contamination of air. The tailing consists of small particles that are easily air borne. Pictures taken of site show tailings blowing off-site. The tailngs contain lead and cadmium which could be harmful if ingested.

01 D. FIRE/EXPLOSIVE CONDITIONS 02 OBSERVED (DATE:_____) POTENTIAL
03 POPULATION POTENTIALLY AFFECTED:_____ ALLEGED
04 NARRATIVE DESCRIPTION
Not applicable

01 E. DIRECT CONTACT 02 OBSERVED (DATE:_____) X POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 950[3] 04 NARRATIVE DESCRIPTION
Potential exists for direct contact. There is no fence or guard to prevent people from entering the tailings pond.

01 F. CONTAMINATION OF SOIL 02 OBSERVED (DATE:_____) X POTENTIAL ALLEGED
03 AREA POTENTIALLY AFFECTED: unknown 04 NARRATIVE DESCRIPTION
Potential exists for contamination of soil. The tailings are porous and so is the surround soil. The soil has been in continous contact with the tailings for a number of years. Any leachate formed by the tailings could have contaminated the soil.

01 G. DRINKING WATER CONTAMINATION 02 OBSERVED (DATE:_____) POTENTIAL
03 POPULATION POTENTIALLY AFFECTED: 10,000[1] ALLEGED
04 NARRATIVE DESCRIPTION
Potential exists for contamination of drinking water by the migration of leachate.

01 H. WORKER EXPOSURE/INJURY 02 OBSERVED (DATE:_____) POTENTIAL ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 0 04 NARRATIVE DESCRIPTION
Mr. Ray Wortley has a lease on the mine tailings and is removing them for use in construction. A few workers load the tailings into dump trucks on-site. These workers could be affected if the tailings are harmful.

01 I. POPULATION EXPOSURE/INJURY 02 OBSERVED (DATE:_____) POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 950[3] 04 NARRATIVE DESCRIPTION
The nearest large population is Park City which is approx. 2 miles from site. There is no means on-site to prevent direct access by the local population.

EPA FORM 2070-12(7-81) 1 = 3 mile radius; 2 = 4 mile radius; 3 = 1 mile radius
*Population of Park City in winter.

EPA POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE 02 SITE NO.

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 J. DAMAGE TO FLORA 02 OBSERVED (Date:_____) X POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION
Potential exists for damage to Flora. Grass and shrubs will not grow on the mine tailings.

01 K. DAMAGE TO FAUNA 02 OBSERVED (DATE:_____) X POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION
Potential exists for damage to fauna. Beaver and muskrats live near the site on Silver Creek. Silver Creek is a 3A (water quality) stream, it is a tributary of the Weber River which is a trout stream.

01 L. CONTAMINATION OF FOOD CHAIN 02 OBSERVED (DATE:_____) POTENTIAL
04 NARRATIVE DESCRIPTION ALLEGED
Potential exists for contamination of food chain (grass and roots) of beaver and muskrats that live and eat on Silver Creek. Crops that are irrigated by Silver Creek could also be contaminated.

01 M. UNSTABLE CONTAINMENT OF WASTES 02 OBSERVED (Date:_____) POTENTIAL
(Soils/runoff/standing liquids/leaking drums) ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 950[3]
04 NARRATIVE DESCRIPTION
Potential exists for unstable containment of waste. Tailings have been observed blowing off-site.

01 N. DAMAGE TO OFFSITE PROPERTY 02 OBSERVED (DATE:_____) POTENTIAL
04 NARRATIVE DESCRIPTION ALLEGED
It is alleged that off-site property is being contaminated. Tailings were found on th north side of the highway and they most liekly came from Richardson's Flat.

01 O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs 02 OBSERVED (DATE:_____)
04 NARRATIVE DESCRIPTION POTENTIAL ALLEGED
Unknown at the time this assessment was made.

01 P. ILLEGAL/UNAUTHORIZED DUMPING 02 OBSERVED (DATE:_____) POTENTIAL
04 NARRATIVE DESCRIPTION ALLEGED
Unknown at the time this assessment was made.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED:

IV COMMENTS
State files

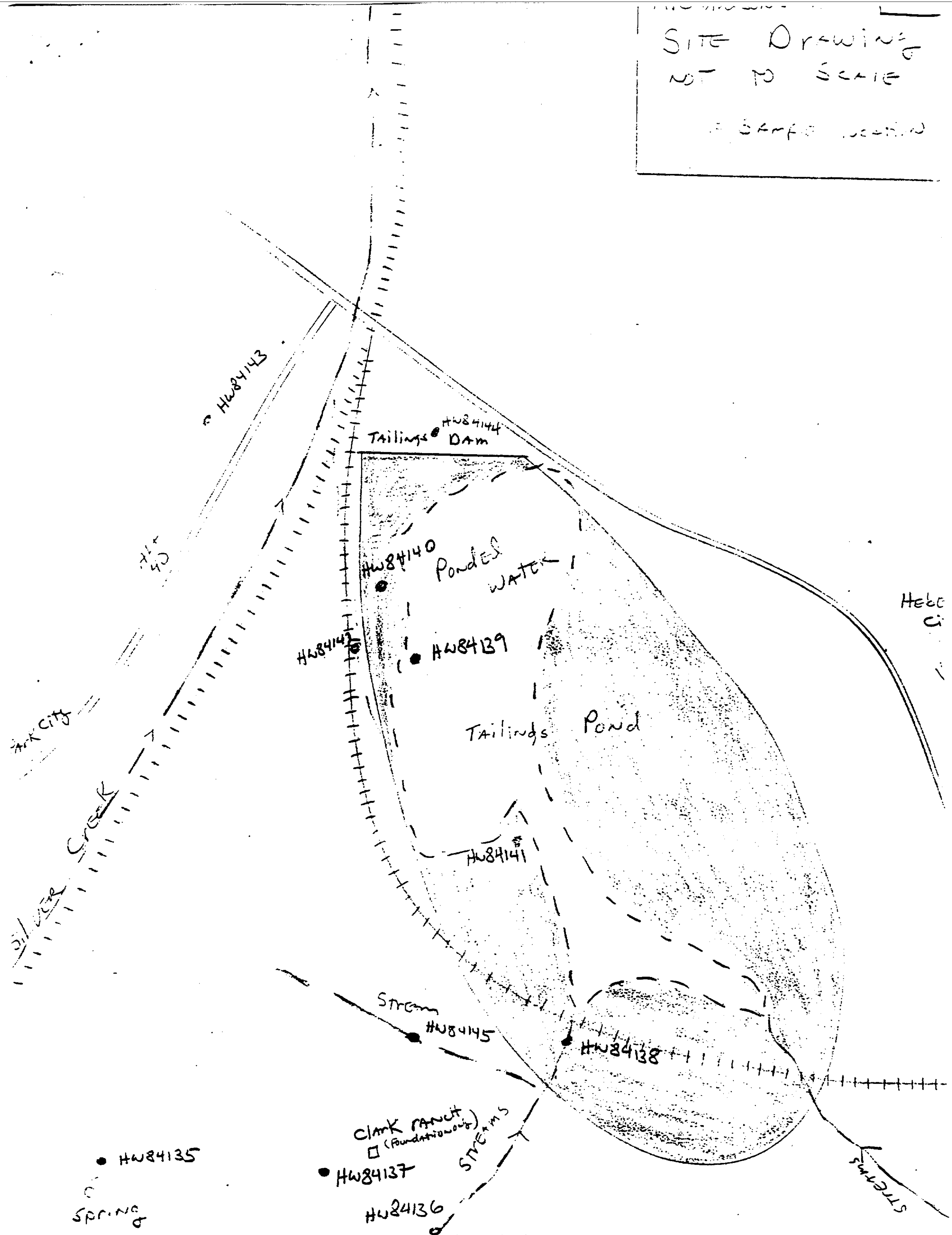
V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Photo #1: Ponded water on Richardson's flat tailings

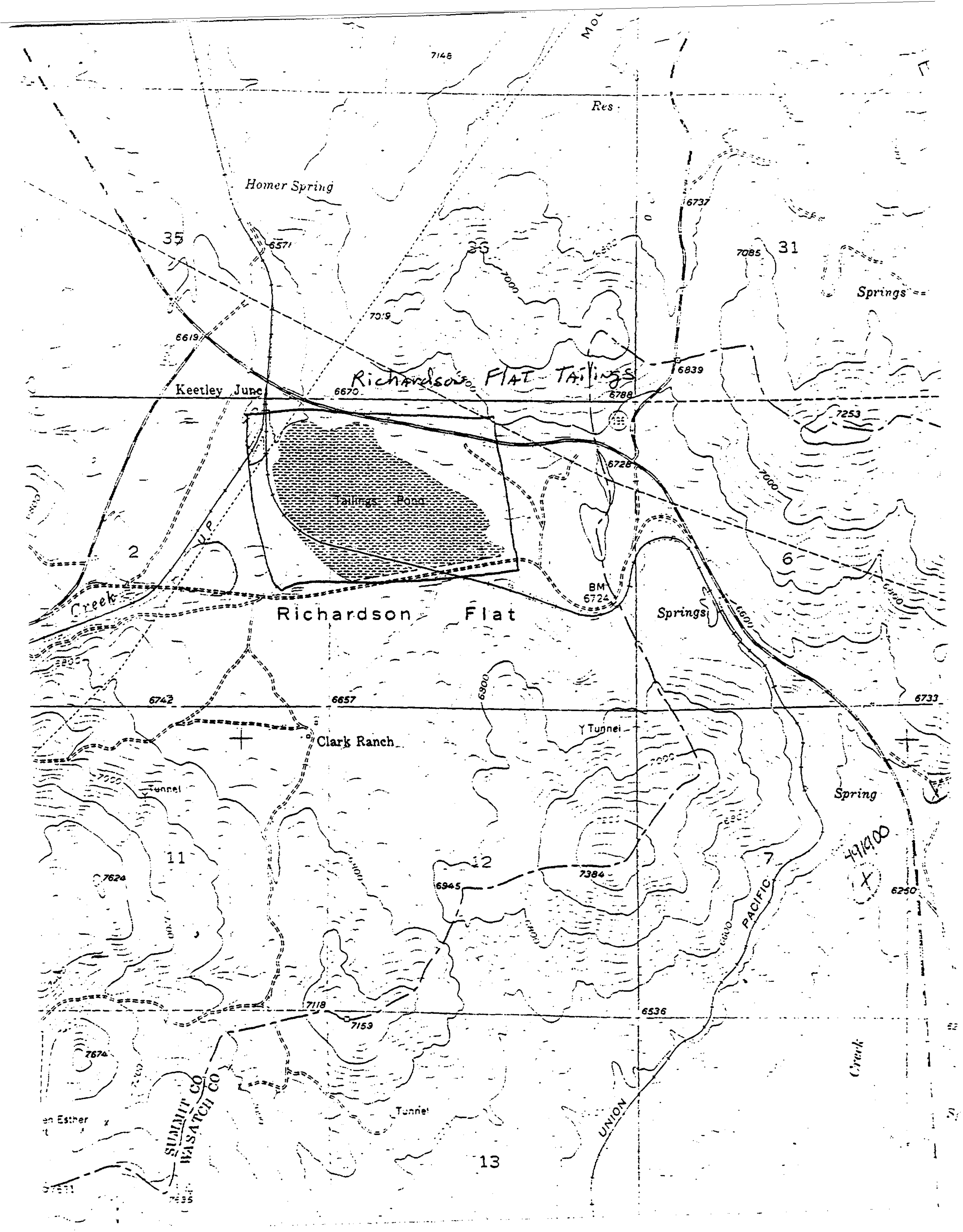
Photo #2: Tailings being blown off-site during a wind storm.

Photo #3: Discolored water in canal made of tailings near Richardson's Flat

Photo #4: Tailings above Richardson's Flat near Silver Creek.



Site Drawing
Not to Scale
Tailings Dam
HW84144
HW84140
Ponded Water
HW84139
HW84142
Tailings Pond
HW84141
HW84138
HW84143
Silver Creek
Park City
Stream
HW84145
Streams
Clark Ranch (Foundation only)
HW84137
HW84136
HW84135
Spring



7148
Res
Homer Spring
6737
35
6571
36
7085
31
Springs
7019
6619
6839
Richardson Flat Tailings
Keetley Junc
6670
6788
7253
6728
Tailings Pond
2
U.P.
6
Creek
BM
6724
Springs
Richardson Flat
6742
6657
6733
Tunnel
Clark Ranch
Tunnel
Spring
11
12
7
7624
6945
7384
4/19/00
6250
PACIFIC
7118
7153
6536
7674
Creek
SUMMIT CO
WASATCH CO
UNION
Tunnel
13